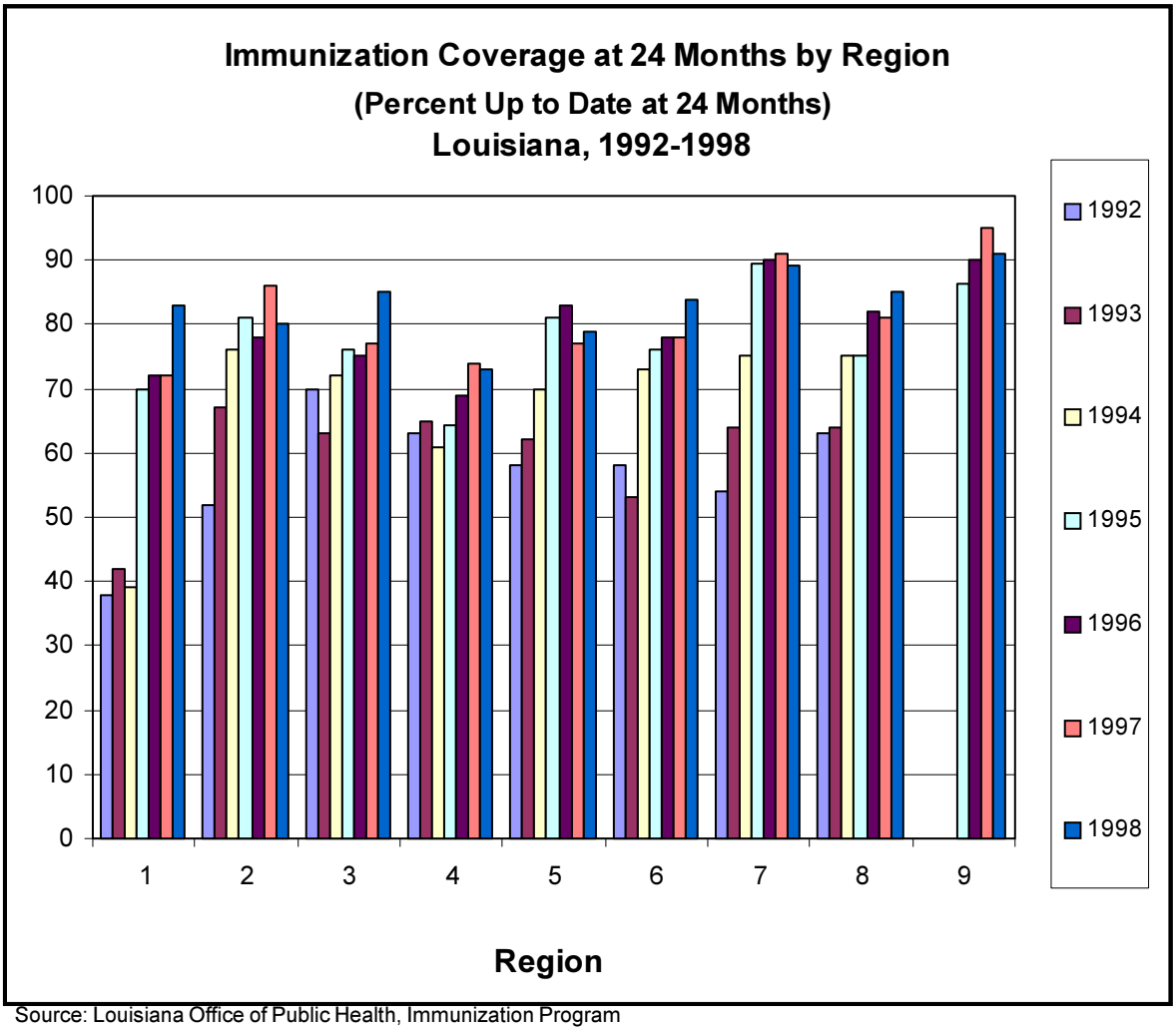
III. HEALTH ASSESSMENT PROGRAMS

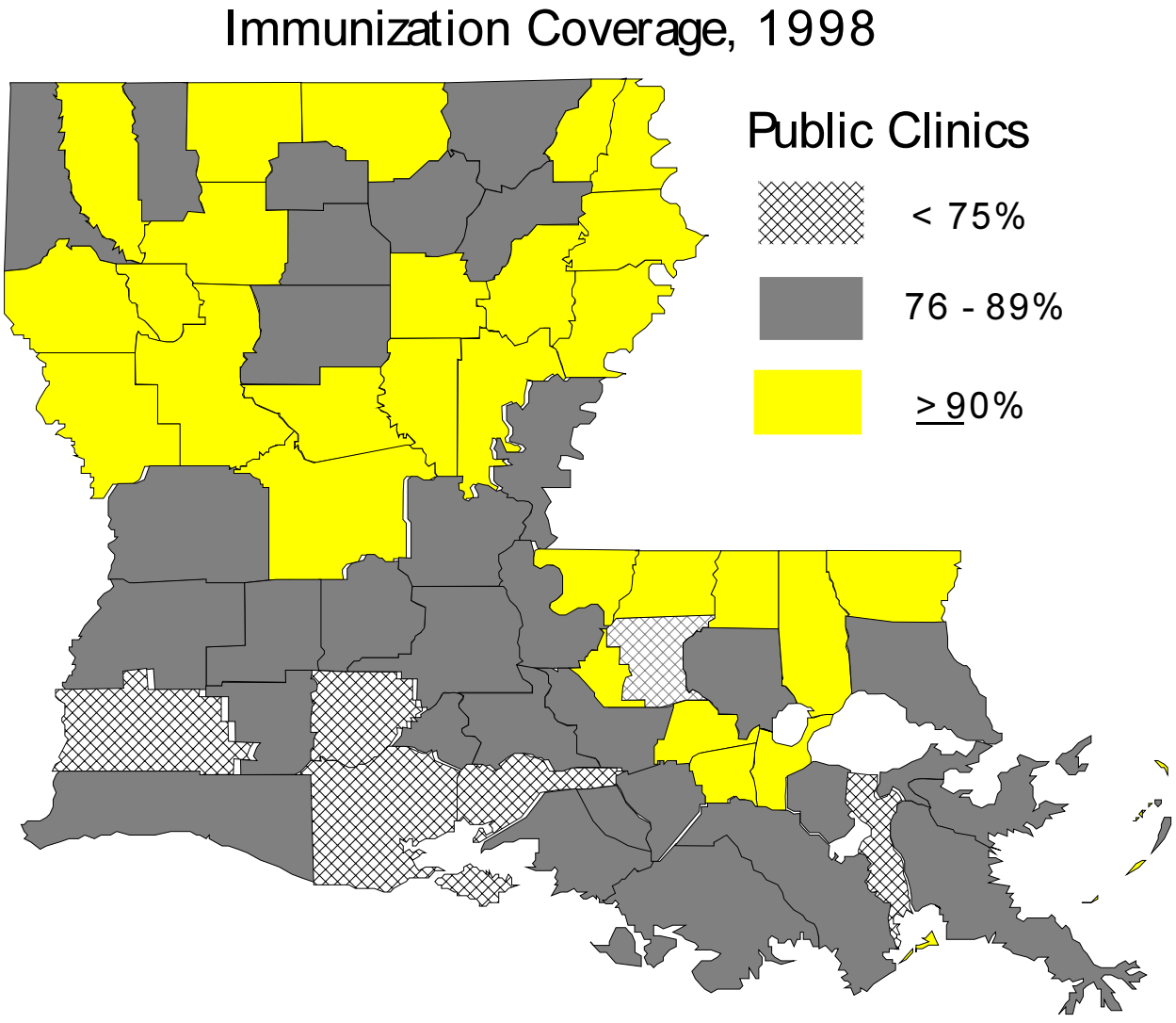
A. Immunization Coverage

The Immunization Program of the Office of Public Health conducts periodic assessments to determine the immunization coverage rates throughout the state. As the graph below displays, rates of coverage have been steadily increasing since 1992, though there have been year to year variations.



Source: Louisiana Office of Public Health, Immunization Program

The map below displays the percent of immunization coverage at 24 months of age among those served in public clinics. East Carroll and Plaquemines parishes have the lowest immunization coverage rates in the state (see following table).



Source: Louisiana Office of Public Health, Immunization Program

Immunizations: Percent Up-To-Date at Age 24 Months Louisiana, 1997-1998*	
Clinic	***%UTD 1997-1998 Results***
Region I	
Jefferson-Grand Isle	99.7
Orleans-Mary Buck	97.3
Orleans-Katherine Benson	94.7
Orleans-Edna Pilsbury	94.0
Orleans-Helen Levy	92.7
Orleans-Mandeville Detiege	90.0
Orleans-Ida Hymel	89.3
Orleans-St. Bernard Gentilly	89.2
St. Bernard	87.1
Jefferson-Marrero	83.3
Plaquemines	80.9
Jefferson-Marrero	73.0
Region II	
Ascension-Gonzales	98.3
West Feliciana	94.6
Ascension-St. Amant	91.4
West Baton Rouge	90.6
East Feliciana-Clinton	89.7
Ascension-Donaldsonville	88.8
Iberville	85.9
Pointe Coupee	85.7
E. Baton Rouge	66.0
E. Baton Rouge-Baker	52.7
Region III	
St. James-Vacherie	100.0
St. John-Edgard	100.0
St. James-Lutcher	96.8
St. John-Reserve	95.8
Lafourche-Thibodaux	91.4
St. Mary-Morgan City	90.6
Lafourche-Raceland	88.7
St. Charles	88.0
Lafourche-Galliano	87.3
Terrebonne	85.3
St. Mary Franklin	81.6
Assumption	81.0
Region IV	
St. Landry-Opelousas	93.9
Evangeline-Ville Platte	92.7
Evangeline-Mamou	90.6
Acadia-Iota	87.9
St. Landry-Melville	86.8
Acadia-Church Point	83.7
St. Martin-Cecilia	81.0
St. Martin-St. Martinville	80.7
Lafayette	79.2
Vermillion-Abbeville	78.4
St. Martin-Breaux Bridge	77.2
Acadia Crowley	77.0
St. Landry-Sunset	75.7
Vermillion-Gueydan	74.1
Vermillion-Erath	72.4
Iberia-New Iberia	72.3
St. Landry-Eunice	71.5
Vermillion-Kaplan	71.4
Iberia-Jeanerette	66.4
Acadia-Rayne	61.2

*Up-to-date includes 4 DTAP, 3 OPV or IPV, and 1 MMR

Immunizations: Percent Up-To-Date at Age 24 Months Louisiana, 1997-1998*	
Clinic	***%UTD 1997-1998 Results***
Region V	
Allen-Oakdale	91.1
Cameron	89.4
Allen-Oberlin	87.5
Beauregard	86.6
Jefferson Davis	85.6
Calcasieu-Sulphur	85.2
Calcasieu-Dequincy	79.0
Calcasieu-Lake Charles	69.4
Region VI	
LaSalle	99.7
Catahoula-Joneville	91.2
Concordia-Ferriday	90.5
Rapides	90.1
Grant	89.9
Avoyelles-Marksville	88.3
Winn	86.3
Vernon	83.7
Avoyelles-Bunkie	78.2
Concordia-Vidalia	74.3
Catahoula-Harrisonburg	N/A
Region VII	
Bienville-Acadia	100.0
Bienville-Ringgold	98.8
Caddo-Vivian	96.4
Natchitoches	96.1
Webster-Minden	95.7
Claiborne	95.5
Sabine	93.8
DeSoto	92.7
Bossier-Bossier City	92.7
Red River	90.5
Caddo-Shreveport	87.0
Webster-Springhill	83.7
Region VIII	
East Carroll	95.7
Caldwell	95.6
Franklin-Winnsboro	94.5
Ouachita-Monroe	93.5
Tensas-St. Joseph	92.8
Union	91.7
Madison	90.2
Ouachita-West Monroe	90.1
West Carroll-Oak Grove	89.5
Morehouse-Basdrop	89.2
Lincoln	85.7
Richland-Rayville	84.2
Jackson-Jonesboro	82.3
Region IX	
St. Helena	100.0
Washington-Franklinton	100.0
Washington-Bogalusa	100.0
Tangipahoa-Hammond	99.3
Tangipahoa-Amite	99.1
Livingston-Albany	92.0
Livingston-Denham Springs	91.1
Livingston-Livingston	90.0
St. Tammany-Slidell	84.1
St. Tammany-Covington	83.2

*Up-to-date includes 4 DTAP, 3 OPV or IPV, and 1 MMR

Source: Louisiana Office of Public Health, Immunization Program

B. Infectious Disease Surveillance

Disease Surveillance

Surveillance of infectious diseases, chronic diseases, and injuries is essential to understanding the health status of the population and planning effective prevention programs. The history of the reporting and tracking of diseases that pose a risk to public health in the United States dates back more than a century. Fifty years ago, morbidity statistics published each week were accompanied by a statement "No health department, state or local, can effectively prevent or control diseases without the knowledge of when, where, and under what condition, cases are occurring." Today, disease surveillance remains the primary tool for the gathering of information essential to controlling disease spread in the population. Achievement of the Centers for Disease Control Healthy People 2000 Objectives depends in part on our ability to monitor and compare progress toward the objectives at the federal, state, and local levels.

Infectious disease surveillance activities are a primary function of the programs within the Department of Health and Hospitals (DHH), Office of Public Health (OPH). Many OPH programs exist to conduct disease surveillance for the state of Louisiana. A sampling of these programs includes the Infectious Epidemiology Program, Sexually Transmitted Diseases Control Program, Tuberculosis Control Program, HIV/AIDS Program, and Immunizations Program.

Disease surveillance involves the collection of pertinent data, the tabulation and evaluation of the data, and the dissemination of the information to all who need to know. This process is a very important aspect of public health because its purpose is the reduction of disease, and death. The immediate use of surveillance is for disease control; the long-term use is to assess trends and patterns in morbidity.

Surveillance also facilitates epidemiologic and laboratory research, both by providing cases for more detailed investigation or case-control studies, and by directing which research avenues are most important. Reports of unusual clusters of diseases are often followed by an epidemiological investigation to identify and remove any common source exposure or to reduce other associated risks of transmission.

Notifiable Diseases

Reporting of notifiable diseases to the health department is the backbone of disease surveillance in Louisiana and nationally. The Sanitary Code, State of Louisiana, Chapter II, entitled "The Control of Diseases," charges the Board of Health to promulgate a list of diseases that are required to be reported, who is responsible for reporting, what information is required for each case of disease reported, what manner of reporting is needed, and to whom the information is reported.

Reporting of cases of communicable diseases is important in the planning and evaluation of disease prevention and control programs, in the assurance of appropriate medical therapy, and in the detection of common-source outbreaks. Surveillance data gathered through the reporting of notifiable diseases are used to document disease transmission, quantify morbidity and estimate trends, and identify risk factors for disease acquisition.

The Health Department routinely follows-up selected diseases, either directly or through their physician or other health care provider. This follow-up is done to ensure initiation of appropriate therapy for the individual and prophylactic therapy for contacts of persons with infectious conditions. All reports are confidential.

Confidential disease reporting has been an essential element in monitoring and maintaining the health of the public in Louisiana. Through participation in disease-reporting, physicians and other health care providers are integral to ensuring that public health resources are used most effectively.

Mandatory reporting is required for a number of infectious diseases, including sexually transmitted diseases, HIV/AIDS, tuberculosis, mumps, and many others. The following description of surveillance procedures for measles and rubella is typical of the procedures followed for all reportable diseases.

Surveillance for Measles and Rubella (German Measles)
All health care providers are required to report suspect cases of measles and rubella by phone immediately to their local public health unit. When a possible case is reported, local and statewide public health personnel are mobilized immediately to evaluate the case and to establish a rapid control effort in order to prevent the spread of the illness. All contacts are interviewed by phone or in person, and children and adults without adequate immunization are immediately vaccinated.

These diseases are very infectious and spread rapidly. One out of every ten measles cases requires hospitalization and one out of every thousand die. Women who are infected with rubella during pregnancy have a high likelihood of having severely deformed babies.

A measles outbreak was identified in Louisiana in 1995, with seventeen cases identified before disease spread was stopped. The outbreak lasted 37 days. Control of the outbreak required the examination of 35 suspected cases, a total of 3,252 phone calls, the immunization of 2,527 individuals, and active investigations at 28 sites (including day care centers, hospitals, and physicians' offices).

In Louisiana in 1997, no cases of measles and rubella were identified.

Selected 1997 Results of Infectious Disease Surveillance
- In 1997 shigella cases decreased 68% from 1996, and Louisiana's case rate was less than half the national rate.
- Statewide and nationally, there was a substantial decrease in the number of AIDS cases diagnosed and reported in 1997. Louisiana ranked 9th highest in the state AIDS case rates and 12th in the number of AIDS cases reported in 1997.
- The number of primary and secondary syphilis cases reported decreased 47% from 1996 and 181% from 1995.
- Fifty-seven cases of invasive meningococcal infections were reported, a 14% decrease from the previous year.
- Four cases of Eastern Equine Encephalitis (EEE) were reported in 1997: three in September and a fourth case in November.
- Louisiana continues to exceed the national rate in tuberculosis cases (406 in 1997) and was ranked 10th in the nation (according to case rate) in 1996. Over a third (36%) of all tuberculosis cases and nearly one-half of pediatric cases (48%) were from the New Orleans region.
- Preliminary data for 1997 show a rate of 6.1 per 100,000 for spinal cord injuries (SCI).
- An outbreak of gastroenteritis caused by *E. coli 0157:H7* occurred in students and teachers of an elementary school.
- Sixty clusters of persons from five states developed gastroenteritis that was associated with consumption of Louisiana oysters. Three different harvest waterways were identified, each associated with a unique Norwalk virus strain responsible for the illnesses.

- *Salmonella newport* was responsible for illness in a large number of people attending a school fund-raising event.
- *C. perfringens* caused an outbreak of gastroenteritis that occurred in attendees of a Christmas banquet after consumption of a catered dinner meal.

1997 and 1998 Disease Statistics
Please refer to the Vaccine Preventable Diseases, STDs, TB, and HIV/AIDS sections in "Chapter II: Morbidity."

Reports
The bimonthly *Louisiana Morbidity Report* and the *Epidemiology Annual Report* are published by the Office of Public Health, Infectious Epidemiology Program. Both publications present information and statistics describing the status of reportable diseases in Louisiana.

C. Sexually Transmitted Disease (STD) and HIV/AIDS Surveillance

Contracting a sexually transmitted disease can have serious consequences. For example, advanced (tertiary) syphilis can produce neurological, cardiovascular, and other terminal disorders, pelvic inflammatory disease, infertility, ectopic pregnancy, blindness, cancer, fetal infant death, birth defects, and mental retardation.

The Department of Health and Hospitals, through the Office of Public Health's STD Control Program and the HIV/AIDS Program, conducts surveillance to determine the incidence and prevalence of STDs and HIV/AIDS, monitors STD and HIV/AIDS trends, collects data on the location and referral of persons with or suspected of having a sexually transmitted disease for examination and early treatment, and conducts partner notification to limit the spread of the diseases.

1996 National Rankings
Nationally, Louisiana has a high ranking among the 50 states with regard to rates of sexually transmitted diseases (STDs) and HIV/AIDS.
- From 1995 to 1997, the state saw improvement in its ranking for syphilis, with a move from 2nd to 7th highest in the nation.
- Gonorrhea rates, however, moved from 10th highest in the nation in 1995 to 5th highest in 1997; chlamydia rates rose from 11th highest in 1995 to 5th highest in 1997. The rise in ranking for gonorrhea and chlamydia reflects an increase in the number of labs included in the state's STD surveillance system. This has resulted in the identification of cases that would not have been identified in the past.
- From 1996 to 1997, Louisiana's AIDS rate ranking declined from 8th to 9th highest in the nation. Improvement was also seen in the city rate rankings for New Orleans (9th highest in 1996, 11th in 1997) and Baton rouge (10th highest in 1996, 19th in 1997).

1997 and 1998 Disease Statistics
Please refer to the STDs and HIV/AIDS sections in "Chapter II: Morbidity."

Reports
The STD Control Program and the HIV/AIDS Program maintain program databases, and generate specific reports and analyses by cause, location, and demographic factors for individuals, communities, and agencies. The HIV/AIDS Program also publishes the *HIV/AIDS Annual Report*, which is available to the public.

D. Tuberculosis (TB) Surveillance

The Louisiana Office of Public Health TB Control Program conducts active surveillance for tuberculosis in the state. Regional staff interact with area physicians, hospitals, and laboratories in the course of their duties. All known or suspected cases of tuberculosis are investigated to assure that transmission of tuberculosis is contained.

Currently, TB Control in Louisiana is working with CDC to enhance surveillance activities. Improved methodology is being implemented to facilitate reporting and tracking.

1997-1998 Disease Statistics
Please refer to the Tuberculosis section in "Chapter II: Morbidity."

E. Alcohol & Drug Abuse Program: Intravenous Drug Use Treatment and STD, TB, and HIV/AIDS Screening

The Division of Treatment Services, Office of Alcohol and Drug Abuse (OADA), Department of Health and Hospitals treats persons with alcohol, drug, and other addiction problems and provides on-site testing for STD's, TB, and HIV for OADA clients.

IV Drug Use Treatment
Due to the great impact of intravenous drug use on the health of the public, treatment of Intravenous Drug Users (IVDU) is a high priority of the OADA. IVDU's are given statewide priority admission, by policy, to all OADA programs and treatment modalities. These programs include outpatient (non-intensive and intensive), detoxification (social and medical), inpatient residential, community based programs (halfway houses, three-quarter way houses, and therapeutic communities), and special programs (criminal justice: Blue Walters, Gambling Courts, and Drug Courts).

STD, TB, and HIV/AIDS Screening
In addition to treatment of addiction problems, OADA makes available STD, tuberculosis, and HIV testing to each individual receiving treatment. Testing is offered, either directly or through arrangements with other public or nonprofit private entities, through a Qualified Service Organization Agreement (QSOA) and a Memorandum of Understanding (MOU) between the Office of Public Health and OADA. This system includes the provision of the necessary supplies by the Office of Public Health's STD Control, TB Control, and HIV/AIDS Programs for on-site STD, TB, and HIV testing of OADA clients.

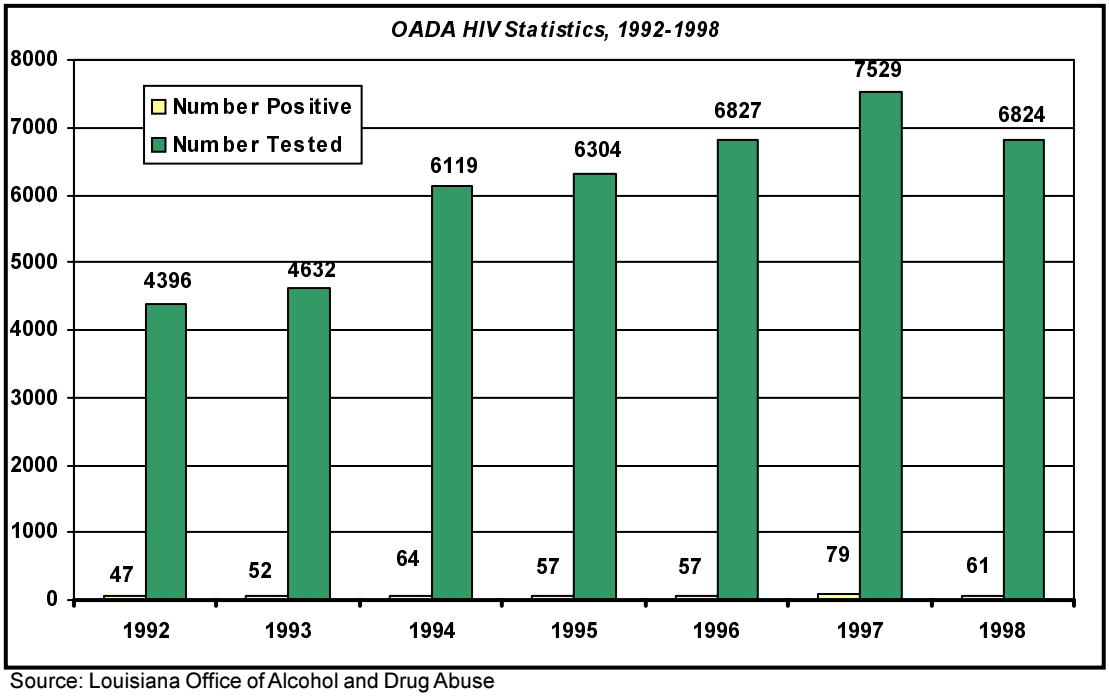
Emphasis is placed on making available within the existing programs early intervention services for HIV in areas of the state that have the greatest need for such services. Ongoing testing and pre- and post-test counseling are provided. Individuals testing positive are referred to the Office of Public Health Outpatient Clinics for further evaluation and appropriate testing. OADA also provides ongoing counseling to its clients regarding HIV prevention and treatment, self-help groups, information and referral services, and counseling with partners of HIV positive clients.

The DHH HIV Program Office has established outpatient clinics for HIV/AIDS patients in all regions of the state. These outpatient clinics are located in the Regional Charity Hospitals, except in Shreveport, where the clinic is located at Louisiana State University Medical Center. Additionally, the DHH HIV Program Office has established consortiums in each of the state's nine Administrative Regions. The consortiums advocate treatment services for the HIV/AIDS client. Upon a client being identified as an HIV patient, he or she is referred to the local consortium and/or directly to the Charity Hospitals outpatient clinics, which are under the auspices of the Office of Public Health. Besides referrals to public agencies, clients can be referred to other HIV supportive services that are available in the community. OADA utilizes this referral network to access additional services for substance abuse clients diagnosed with HIV/AIDS. The Office has established a working relationship with the referral entities and is able to monitor the needs of clients who have been referred.

OADA collaborates with the Office of Public Health, HIV/AIDS Services Program in the provision of cross-training, pre- and post-test counseling for clients, cooperative agreements, funding requests and other appropriate activities targeting HIV early intervention and AIDS services for substance abusers.

1997-1998 Program Statistics

- OADA Management Information System indicates that there were 4,865 intravenous drug users (IVDU) admissions during SFY 1998 (18% of the total population) and 5,142 IVDU clients during SFY 1997 (20% of the total population). These figures indicate no significant fluctuations within the last three years (IVDU admissions for SFY 1996 were 4,820 or 19% of the total population).
- The Office of Public Health's (OPH) summary of statistics for calendar year 1997 shows that 7,529 individuals from OADA clinics were tested for HIV. Of this population, 79 (1%) tested positive for the HIV virus. OPH data for the 1998 calendar year indicates that 6,824 OADA clients were tested for HIV and only 61 (1%) were found to be HIV positive. These data reveal no significant changes in HIV positive findings since 1992.



Source: Louisiana Office of Alcohol and Drug Abuse

F. Statewide Child Death Review Panel

The Office of Public Health's Injury Research and Prevention Section maintains a database on cases examined by the multidisciplinary, legislatively-mandated Statewide Child Death Review Panel. The Panel is currently charged with examining records for all unexpected deaths of children under age 10 in the state to assure that proper investigation, follow-up, and prevention programs are in place.

Throughout 1998, the coordinator for the Panel worked to establish local child death review panels. The purpose of local panels is to ensure the adequacy, completeness, and timeliness of investigations and data collection and to facilitate the translation of investigative findings into preventive actions.

Reports
An annual report of Panel findings is presented to the Legislature and is available to the public through the Injury Research and Prevention Section.

G. Brain and Spinal Cord Injury Registry

Injuries to the central nervous system are one of the most severe types of injury in terms of both human suffering and costs to society. This legislatively-mandated registry collects information from all Louisiana hospitals on the demographics, types, causes, extents, risk factors, and outcomes of central nervous system injuries. This information is then used to generate prevention programs. Examples of prevention programs generated from these data include prevention of falls from deer stands, safe tackling practices for high school football players, and recommendations to make junior rodeo riding safer.

1996 Statistics
Please refer to the Traumatic Brain Injury section in "Chapter II: Morbidity."

Reports
OPH's Injury Research and Prevention Section produces an annual report, available to the public, based on the data from this registry.

H. Injury Specific Deaths Database

This database compiles death certificate information on all injury-related deaths in the state for the years 1986 to the present. This information is used to describe patterns in the occurrence of injuries in Louisiana, for both the education of the public and for guidance in the development of prevention programs.

Reports
The Injury Research and Prevention Section maintains this database and is able to generate specific reports and analyses by cause, location, and a variety of demographic factors for individuals, communities, or agencies.

I. Burn Injuries

Hospitals are required by law to report severe burn injuries to the Office of the State Fire Marshal to assist in the identification of arsonists. In 1997, the Injury Research and Prevention Section entered into a partnership with the State Fire Marshall to provide a broader analysis of data that describes patterns of burn injuries in Louisiana.

Data on burn injuries in Louisiana are available for the years 1995 through 1998. The Section is currently conducting a case control study to identify the risk factors for cooking burn injuries.

J. Drowning Surveillance

After identifying drowning as the third leading cause of injury deaths for men in 1996 (behind motor vehicles and firearms), the Injury Research and Prevention Section began collecting information on all drowning deaths that occurred in 1998. Information being collected on drowning includes the use of personal floatation devices, ability to swim, and whether or not the person entered the water intentionally. The Injury Research and Prevention Section will be producing a report on drowning in Louisiana and identifying opportunities for drowning prevention.

K. Louisiana Adolescent Health Initiative

Begun in September of 1995 by the DHH, Office of Public Health, the Louisiana Adolescent Health Initiative facilitates a coordinated, multi-disciplinary approach to adolescent health care, disease prevention, and health promotion in the state. It provides an infrastructure to enable local communities to address adolescent health needs more effectively and efficiently.

The collection of data and dissemination of information are essential parts of the Initiative. Providing information on both adolescent health issues and on current adolescent health activities is a priority. The state public health office serves as a synthesizer and central repository for such information. The use of statewide teen health questionnaires and adolescent focus groups, coupled with the collection of adolescent health statistics, provides parents, communities, politicians, and policy makers with a clear picture of adolescent health in Louisiana. With technical assistance from the DHH, Office of Public Health, regional and local communities are able to identify and prioritize teen health needs. OPH gives presentations on adolescent health to local communities and provides technical assistance to communities in the design, implementation, and evaluation of their community-based programs.

Currently, there are many state and local projects that emphasize different aspects of adolescent health. Some focus on teenage pregnancy or teen parenting, while others focus on HIV/AIDS, tobacco control, conflict resolution, cardiovascular health, or on the maintenance of school-based health clinics. The Initiative allows for the planning, development, implementation, and evaluation of these activities in a coordinated, collaborative fashion. In addition, it broadens the scope of cooperation to include the DHH Offices of Mental Health and Alcohol and Drug Abuse, the Division of Youth Development, and others. Such team-building efforts are necessary to merge the work of all agencies working with the common goal to ensure health and happiness for Louisiana's youth.

Results

Activities to date include:

- Collecting of statistical data in the area of adolescent health, including emotional and social indicators for the *Louisiana Adolescent Health Data Book*
- Producing and distributing a listing of statewide programs that provide counseling and medical services to help teens prevent pregnancy to be included in the *LA Teen Pregnancy Prevention Directory*
- Producing statistical pamphlets for statewide distribution on the current health status of Louisiana adolescents
- Compiling reports from Orleans Parish Women, Infants, and Children nutrition program (WIC) teen health questionnaire (250 surveys collected to date)
- Planning and coordinating the AAUW Sister to Sister Summit
- Increasing coordination and networking with both internal DHH, OPH programs, and external agencies involved in public health and social welfare
- Collaborating with other state and national adolescent projects
- Providing technical assistance to community coalitions that are performing comprehensive adolescent activities
- Giving presentations on the Initiative and on adolescent health to national organizations, statewide organizations, and community-based organizations
- Serving as an Adolescent specialist on various statewide adolescent Task Forces
- Placing highlights of the Initiative in national and local newsletters.

L. Oral Health Assessment

The effects of poor oral health can greatly impact the overall health of an individual. Poor oral health in children can have far-reaching results, including infection, absence from school, and malnutrition. The Oral Health Program of the Office of Public Health, Maternal and Child Health Program, is charged with monitoring the oral health status of Louisiana's children.

Comprehensive Oral Health Needs Assessment

The Oral Health Program has several current initiatives, one of which is a Comprehensive Oral Health Needs Assessment among Louisiana's children. This needs assessment uses data for successive years, gathered from two sources: survey data collected by the Oral Health Program and Dental Medicaid claims data.

In 1997, information on primary oral health status was collected from a dental survey conducted in eight elementary and high schools with school-based health centers. In this survey, only 15.8% among all children examined were caries free, and 5.2% of the 17-18 year old population were caries free. Treatment urgency was determined after the full oral examination was completed; 21.9% of males examined and 18.8% of female students were in need of urgent care. Although a large proportion of the children, 75.2%, could benefit from the application of dental sealants, only 6.2% of all children had any sealants present.

M. Environmental Epidemiology and Toxicology

Louisiana ranks among the top states in the United States in the per capita production of hazardous wastes and in the amount of chemicals released into its water, air, and soil.

The Office of Public Health, Section of Environmental Epidemiology and Toxicology (SEET) promotes the reduction in chronic disease morbidity and mortality related to human exposure to chemical contamination within the state of Louisiana. SEET oversees and responds to public health needs with regard to environmental health issues.

In recent years, there has been an increase in public awareness of the acute and chronic health effects of chemicals in the environment and a greater demand for SEET to investigate these effects. SEET attempts to address residents' concerns by:

- Identifying toxic chemicals in the environment that are likely to cause health effects
- Evaluating the extent of human exposure to these chemicals and the adverse health effects caused by these exposures
- Making recommendations for the prevention/reduction of exposure to toxic chemicals and the adverse health effects caused by these exposures
- Promoting a better public understanding of the health effects of chemicals in the environment and of the ways to prevent exposure.

Activities conducted by SEET include:

Epidemiological and Toxicological Investigations (Discussed in this section.)
- Public Health Assessments and Consultations (Toxic Site Assessments)
- Pesticide Exposures
- Disease Cluster Response
- Cancer Mortality Trend Analysis
- Mercury Blood Screening

Environmental Health Advisories (See "Chapter IV: Preventive Health Outreach Programs".)
- Mercury in Fish

Environmental Health Education (See "Chapter IV: Preventive Health Outreach Programs".)
- Methyl Parathion and Other Pesticides
- Mercury in Fish
- Health Professional Education
- Public Health Response for Chemical Spills

The projects described below are representative of those coordinated by SEET.

Public Health Assessments and Consultations

Health Assessors complete extensive Public Health Assessments or shorter Health Consultations for Superfund and other hazardous waste sites in Louisiana. The Public Health Assessment is an evaluation of all relevant environmental information, health outcome data, and community concerns around a hazardous waste site. It identifies populations potentially at risk and offers recommendations to mitigate exposures. A HEALTH CONSULTATION is a response to a request for information and provides advice on specific public health issues that could occur as a result of human exposure to hazardous material. Based on the above documents, health studies, environmental remediation, health education, exposure investigations, or further research may be recommended.

There are 600-700 CERCLA (Comprehensive Environmental Responsibility, Compensation, and Liability Act) hazardous waste sites in Louisiana. SEET is evaluating the public health impact of 27 of these sites (see map of sites on the following page). An Onsite Review Update and five Health Consultations were written in 1998. Details concerning these activities can be obtained from SEET. SEET also (1) develops fact sheets or other handouts to help inform the local community about health issues around hazardous waste sites, (2) responds to individuals' requests for toxicological and medical information, and (3) makes presentations in public meetings and availability sessions around the state.

Madisonville Creosote Works

The Madisonville Creosote Works (MCW) site located in Madisonville, St. Tammany Parish, Louisiana is an example of a site that SEET is currently evaluating. MCW opened in the 1950's as a wood treatment facility where wood products were treated with creosote. All wood preserving activities were stopped in 1994, and the facility is no longer in operation.

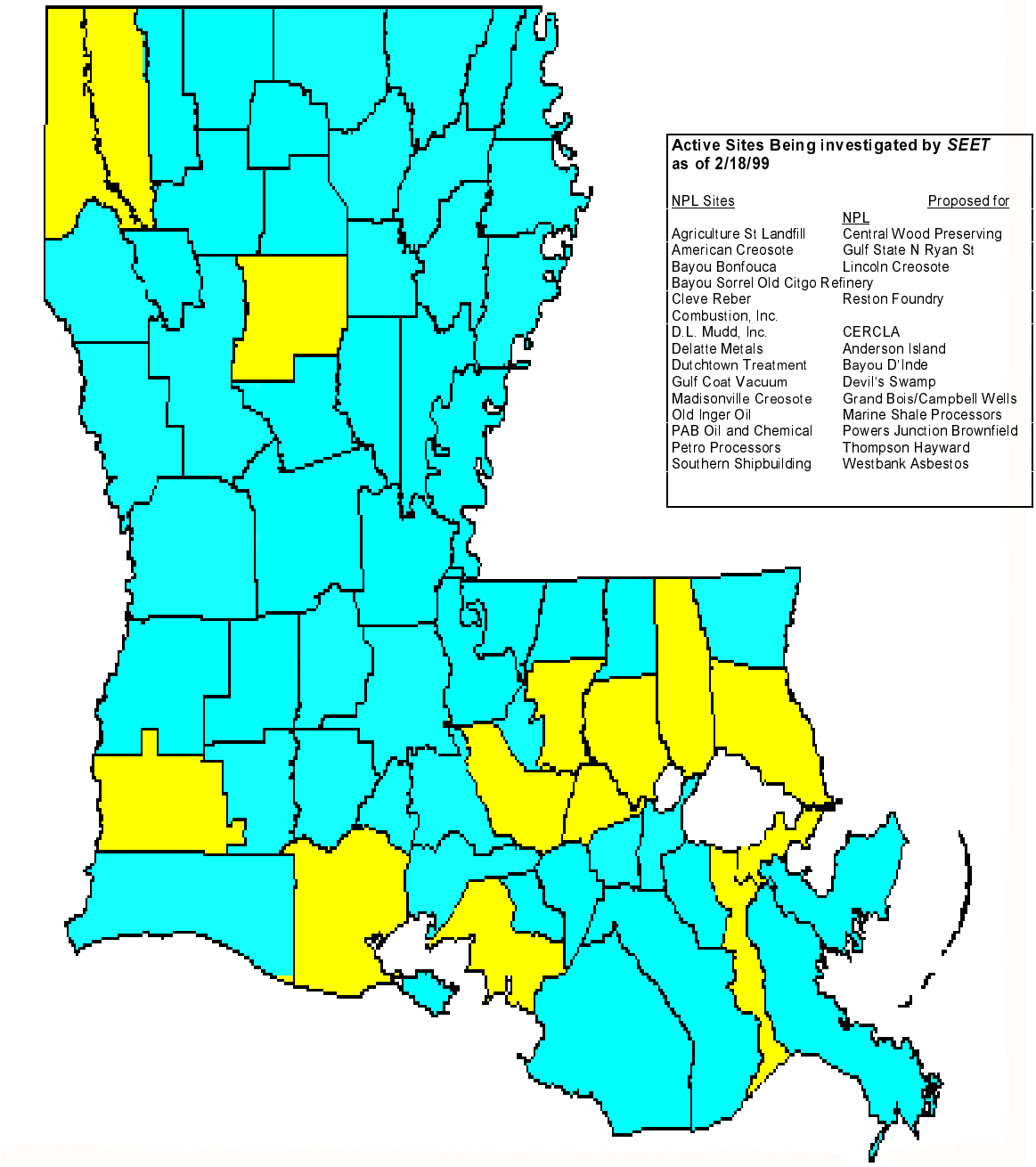
Creosote can cause burning of the eyes and reddening, blistering, and peeling skin. Creosote contains Polycyclic Aromatic Hydrocarbons (PAH), which can cause skin irritation and rashes in people and tumors in laboratory animals. PAH's have been associated with lung and skin cancers.

In 1991, LDEQ's Inactive and Abandoned Sites Division conducted an investigation of off-site contamination near the MCW site. This investigation revealed approximately 300 linear feet of creosote contamination in a drainage ditch along Louisiana Highway 22, and 2,300 feet of contamination within an unnamed intermittent stream southeast of the facility.

Staff from SEET attended a public meeting on September 10, 1996 to gather information. On September 5, 1997, a Public Health Assessment was released that addressed community health concerns for the area. Working with state and federal environmental agencies, SEET is currently reviewing environmental sampling results and will give public health recommendations based on these results in a Public Health Consultation to be released in the Spring of 1999.

Parishes with Superfund and Selected Hazardous Waste Sites in Louisiana

(Lighter shades represent parishes with active sites being investigated by *SEET* as of 2/18/99.)



Active Sites Being investigated by *SEET* as of 2/18/99

NPL Sites	Proposed for NPL
Agriculture St Landfill	Central Wood Preserving
American Creosote	Gulf State N Ryan St
Bayou Bonfouca	Lincoln Creosote
Bayou Sorrel Old Citgo Refinery	
Cleve Reber	Reston Foundry
Combustion, Inc.	
D.L. Mudd, Inc.	CERCLA
Delatte Metals	Anderson Island
Dutchtown Treatment	Bayou D'Inde
Gulf Coat Vacuum	Devil's Swamp
Madisonville Creosote	Grand Bois/Campbell Wells
Old Inger Oil	Marine Shale Processors
PAB Oil and Chemical	Powers Junction Brownfield
Petro Processors	Thompson Hayward
Southern Shipbuilding	Westbank Asbestos

Source: Section of Environmental Epidemiology and Toxicology

Pesticide Exposures

SEET receives information on pesticide exposure cases reported to the Louisiana Department of Agriculture and Forestry. Staff obtain medical records when available, and then review data about each case, including statements, investigator's report, and any sample results. SEET also maintains a statewide pesticide hypersensitivity registry. When all data are reviewed, SEET's medical consultant makes a determination about the potential short- and long-term health effects in each case and sends a letter to the complainant with an explanation for this determination and, when appropriate, a recommendation to ameliorate the situation. Each case is classified as one of the following:

- Confirmed--adverse health effects resulting from a reported pesticide exposure are verified
- Likely--adverse health effects resulting from a reported pesticide exposure are likely
- Possible--adverse health effects resulting from a reported pesticide exposure are plausible
- Unlikely--adverse health effects resulting from a reported pesticide exposure are improbable
- None--adverse health effects resulting from a reported pesticide exposure are ruled out.

1997-98 Pesticide Cases (non-Methyl Parathion)

There were 35 reported pesticide complaints during the period of October 1, 1997 through September 30, 1998. This is three more reported complaints than the previous year. Out of the 32 complaints for which determinations have been made, six (19%) were unlikely, 18 (56%) were possible, two (6%) were likely, and none (0%) were confirmed. Six complaints had missing information (19%).

Complaints were made in 24 parishes, which is one more parish than the previous year. Parishes with two or more complaints were Jefferson (6), St. Landry (3), Orleans (2), East Baton Rouge (2), Iberville (2), Iberia (2), and Rapides (2).

Methyl Parathion

From 1996 through 1998, a multitude of illegal sales and applications of methyl parathion in Louisiana resulted in the contamination of many homes. SEET staff continue to monitor households living in homes with Methyl Parathion contamination. (For public health education efforts, see the section on Preventive Health Outreach Programs.)

Using an established protocol, a multi-agency clean-up process involving the U.S. Environmental Protection Agency, the Agency for Toxic Substances and Disease Registry, the Army Corps of Engineers, the Louisiana Department of Agriculture and Forestry, and the Louisiana Department of Health and Hospitals began on January 3, 1997. Under this protocol, 1,800 households were environmentally sampled and 583 of these households tested positive. Urine samples were collected from approximately 431 households, and of these, 175 households were renovated. On August 1, 1997 a new national protocol, which included urine monitoring, was implemented and changes were made in the minimum and maximum levels deemed safe. From August 1 to December 31, 1998, 109 homes were environmentally sampled and urine samples were collected on 81 of these households. Of these 81 households, 37 were classified as "No Further Action," 33 required urine monitoring, and eleven households were relocated. There have been over 1,200 people who have participated in the voluntary urine analysis program since its implementation in 1997.

Disease Cluster Response

When a disease cluster is thought to be related to an environmental chemical cause, SEET provides information on possible chemicals that could cause the disease cluster and comparative rates of the disease at the parish, state, and national levels.

Coteau Childhood Leukemia

Public concern about childhood leukemia in the community of Coteau, Louisiana (in Iberia parish) was brought to the attention of SEET in May 1996. SEET has assessed the occurrence of childhood leukemia in the area of Coteau with the assistance of the Louisiana Tumor Registry. It has been determined that the incidence of childhood leukemia in Coteau is unusual, both spatially and temporally.

SEET began a population-based case-control study of childhood leukemia in a four parish area consisting of Iberia, Lafayette, St. Martin and Vermilion parishes. These four parishes were selected as the study area to provide a larger number of cases and to increase the probability of including children from neighboring areas who may have spent time in Coteau even though they did not live there.

A case in the OPH study is defined as a child who was diagnosed with leukemia between January 1, 1983 and December 31, 1997 while living in Lafeyette, Iberia, St. Martin, or Vermillion parish. The child must have been born in one of the four parishes and must have been less than 15 years old at the time the leukemia was diagnosed. Information on children with leukemia has been obtained from the Louisiana Tumor Registry and the Acadiana Tumor Registry. There have been 37 known cases being investigated by SEET as of January 1998 in the four-parish area.

A detailed survey instrument (questionnaire) has been developed by SEET to identify risk factors associated with childhood leukemia. A qualified interviewer has been hired from the Lafayette area to conduct all interviews with cases and controls.

Cancer Mortality Trend Analysis

There has been concern for some time about whether industries along the Mississippi River between Baton Rouge and the Gulf of Mexico contribute to elevated lung cancer rates in the area. SEET is completing a trend analysis of the Lower Mississippi River corridor to provide more accurate information to address this concern. Cancer rates, demographic factors, and industrial development have been tracked over 30 years, from the 1960s to the 1990s.

Cancer Mortality

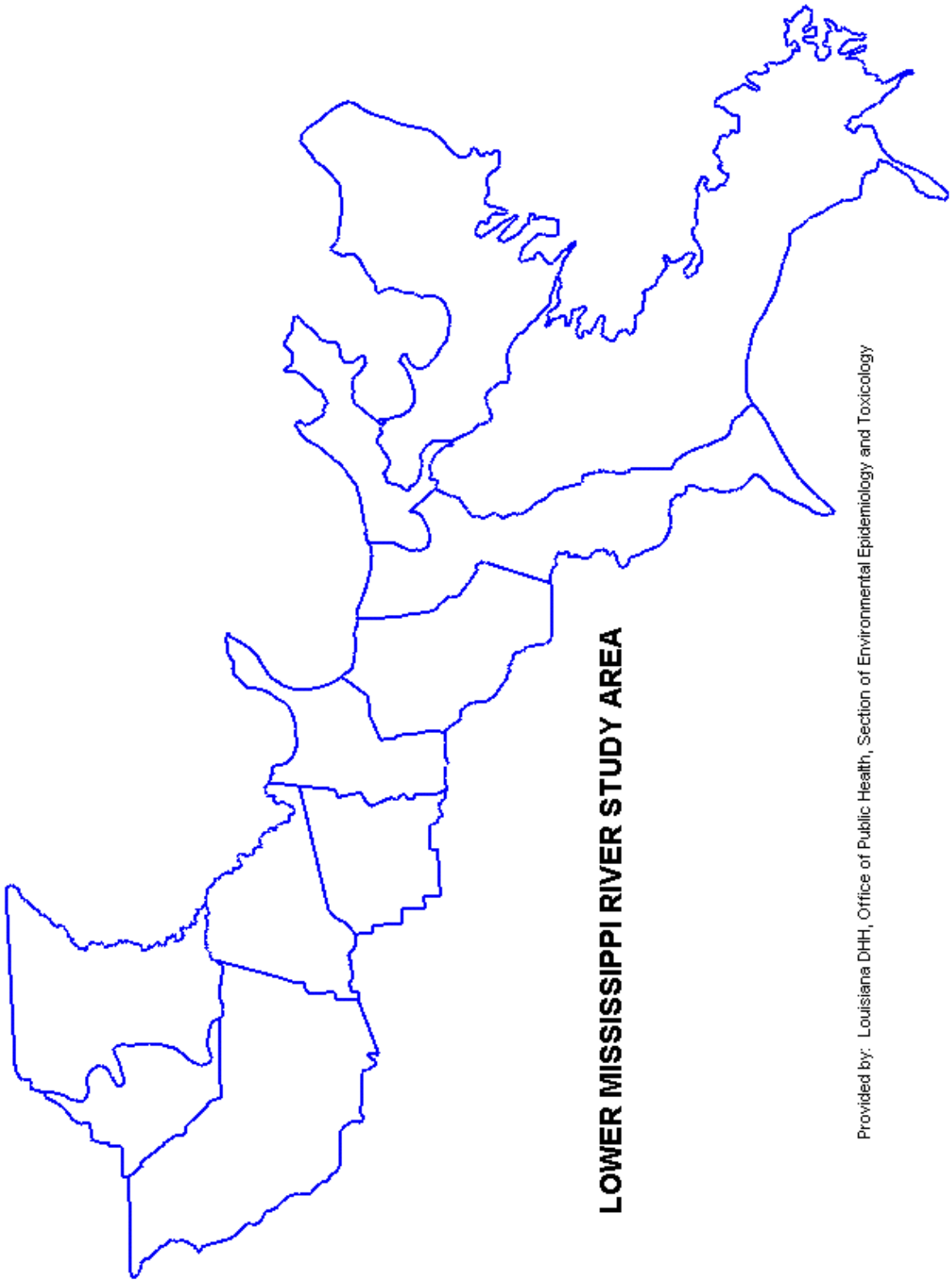
Preliminary analysis of the data reveals that most of the average annual age-adjusted mortality rates (1960-1993) are nearly equal for the urban portion of the study area and the study area as a whole (the Lower Mississippi River corridor). This is expected since the urban area had most of the population base (80%) of the entire eleven parish region (see map of study area following this section). There were no statistically significant excesses or deficits of cancer deaths in the urban area as compared with the entire study area. However, lung cancer death rates for African-American males and white females in the urban area were higher than, but not significantly different from, the entire region. Most of the average annual age-adjusted mortality rates were nearly equal for the rural region when compared with the entire study area (1960-1993). Also in the rural region, stomach cancer was significantly elevated in African-American males, and lung cancer death rates for white males were higher than, but not significantly different from, the entire region.

Demographics
According to information obtained for the census years 1960, 1970, 1980 and 1990, more than 80% of the population in the study area has lived in the area since the 1960s, and more than 60% of that population is white. The African-American population in the study area has declined in rural areas and grown in urban areas. Median family income in the study area increased from $4,720 in 1960 to $29,512 in 1990. Since 1970, median family income increased by more than $10,000.

Industrial Mapping
The industries in the Lower Mississippi River corridor are distributed into twelve clusters (three or more industries in each cluster) spread among seven of the eleven parishes. In the early 1950s there were 15 industries in the corridor; by 1994, there were 92. Manufacturing industries in the area with over ten employees were categorized according to the potential cancer risk they posed. Between 1988 and 1994, the number of industries emitting known human carcinogens dropped from 42 to 36.

Mercury Blood Screening
In 1998, 313 individuals from selected parishes in Louisiana participated in a blood mercury screening. Ninety-eight percent of the study participants were within an expected range of mercury blood levels. The remaining two percent of participants exhibited slightly elevated mercury levels and were advised to decrease fish consumption.

The outcome of this investigation is a health risk assessment to be conducted in 1999, which will assess the exposure status of subsistence fishermen and their families as it relates to blood mercury levels.



LOWER MISSISSIPPI RIVER STUDY AREA

Provided by: Louisiana DHH, Office of Public Health, Section of Environmental Epidemiology and Toxicology

N. Vital Statistics

Vital statistics data provide a body of information that is invaluable for monitoring the health of Louisiana's residents. These data are collected via birth, death, fetal death, abortion, marriage, and divorce certificates. Collection and processing of vital statistics information is the responsibility of the Vital Records Registry in the Office of Public Health, Division of Health Information.

A large number of health status indicators rely on vital statistics data. These indicators include infant death rates, numbers of low birthweight infants, percentage of mothers lacking adequate prenatal care, teen birth rates, homicide and suicide rates, rates of death from AIDS and motor vehicle injuries, and many others. Vital statistics data are used by both the public and the private sectors to identify health needs in the population and to target effective health interventions. Vital statistics health status indicators are also an important component in measuring achievement of Centers for Disease Control Healthy People 2000 objectives.

The role of the State Center for Health Statistics in the Division of Health Information is to analyze vital statistics data and distribute findings to government programs, community organizations, universities, and interested members of the general public. The Center accomplishes this through publication of the annual *Louisiana Vital Statistics Report*, and through response to ad hoc requests for data and information. The Center also is responsible for compilation of information from Department of Health and Hospitals programs to create the legislatively mandated annual *Louisiana Health Report Card*.

1997 Statistics
Please refer to "Chapter I: Population and Vital Statistics."

Reports
The annual *Louisiana Vital Statistics Report* is available to the public through the State Center for Health Statistics. The Center maintains databases of births, deaths, fetal deaths, abortions, marriages, and divorces. It responds to data requests from communities, agencies, and the general public through generation of ad hoc reports and analyses.

O. Public Health 9 and Family Planning (PH-9/FP) Project

The Public Health 9 (PH-9) and Family Planning (FP) project, carried out by DHH, Office of Public Health, Division of Health Information, began by exploring the feasibility of replacing the central data entry and billing services, for which OPH is now contracting at a cost of more than $600,000 per year, with a more modern system that would reduce costs and still provide a higher quality data stream, faster billing and reimbursement, and on-site and central management support systems. The scope of the project was 135 public health clinics, 300,000 patients, 650,000 visits, and 2.6 million services per year.

A major pre-existing effort to modernize the paper forms used by 9 Public Health programs in parish health units (referred to as the PH-9 forms) was just coming to completion in early 1997. These forms were used to capture the information needed for reimbursement of the eligible services provided in the clinics, and for reporting programmatic information required by the program's federal funding agencies.

The resulting new PH-9/FP paper forms are used to collect program data on patients and services in the following OPH programs: Maternal and Child Health, Children's Special Health Services, Eye Health, Communicative Disorders, Genetic Diseases, Immunizations, Tuberculosis Control, Sexually Transmitted Diseases, and Family Planning. Each of the programs designed their own forms in order more accurately to collect, maintain, and retrieve clinical and demographic data for funding and public health purposes, resulting in 11 program-specific forms, each much simpler than the old combined form to be replaced. Since the new forms required a revised data capture process, transition to the new forms represented an opportunity at the same time to engineer the system correctly to capture data at the point of service (POS) and provide timely clinical and management data to the local and regional managers.

Division of Health Information designed, developed, tested, and deployed an NT 4.0-based Dial-Up Networking (DUN) and distributed Access information system, where data were entered in the clinics by existing staff who know the clients. These data are uploaded and merged into a central database nightly for billing, and yet are immediately available to the local clinic management for production control and morbidity assessment in the clinic population. Clinic personnel were able to enter a full clinic visit record in 25 seconds at the end of the first week of deployment. The application supports electronic billing and posting of remittance advice, and reduced mean reimbursement delay by more than a month.

The application was developed for less than $20,000 and requires less than 2 full time persons ($70,000) to operate the central billing, and steady state Information System (IS) staff time is minimal. A current support contract for $24,000 for the application will decline in dollar amount in the following years. The $10,000 communication cost for uploading data will go to zero when the Wide Area Network (WAN) reaches the Parish Health Units (PHUs) in this next year. A data entry operator for the Office of Public Health lab currently provided by the contractor will need to be replaced for approximately $25,000. As before, other fiscal audit staff remain necessary for quality control, projections, and other analyses. Ideally, fiscal staff should be increased to maximize benefits from the data, as such staff may well pay for itself in operational savings.

The new PH-9 hardware, software, and communication systems have been deployed statewide but are currently being used in only three of the nine regions, so the previous system and contracted billing services continue to provide for the rest of the state.

P. State Health Care Data Clearinghouse

Act 622 defined the State Health Care Data Clearinghouse to enable the collection of health care and health industry-related data. In prioritizing the mandates of Act 622, the Office of Public Health, Division of Health Information considered the various health information data streams already in existence and the data collection experiences of some 36 other states, and elected to focus its initial data collection efforts on hospital discharge data. For the most part, the targeted data are a natural by-product of hospital billing activity and are already widely available in a reasonably standard electronic format. The collection of these data will place the smallest additional burden on the state's medical care providers, while speaking directly to the legislatively recognized need to understand "patterns and trends in the availability, use, and charges for medical services."

Accordingly, the Office of Public Health developed Rule LAC 48:V. Chapter 151 in conjunction with an advisory panel composed of representatives of the health care industry, academia, and state government. The Notice of Intent for Rulemaking was published in the July 1998 issue of the Louisiana State Register and the Final Rule was published in the October 1998 issue. The Rule defined the core Hospital Discharge Data elements to be reported to the Office of Public Health in accordance with existing national and international data standards; developed standards of accuracy, quality, timeliness, economy, and efficiency for the provision of data; identified the most practical methods of collecting, transmitting, and sharing data; and outlined appropriate rules and regulations to ensure data confidentiality.

Activities to date include:

- Conducting three-month phone survey of approximately 180 Louisiana hospitals regarding their transmittal capacity and data availability.
- Providing information to hospitals regarding regulations and submittal procedures by newsletter, phone, and e-mail.
- Developing Oracle database repository to house the data securely.
- Developing and testing a new software, the Hospital Inpatient Discharge Data Quality Assurance Tool (QAT). The primary purpose of the QAT will be to help improve both data quality and timeliness. The secondary purpose is to provide a simple data capture tool for hospitals that still have paper billing systems.
- Conducting the first training session for hospital staff in the use of the QAT.
- Developing a project management database in Access that includes survey and hospital contact information, waiver and extension data, submission log, and error reporting.
- Currently receiving the first data submissions from hospitals for discharges occurring between 1/98-6/98. Out of the 180 licensed hospitals, 55% submissions have been received, 38% have requested extensions, and 7% have general waivers.
- Checking data for errors through use of the QAT, and providing the first set of error reports to the hospitals. This initial submission and error checking process will help hospitals to improve the quality of their data, especially with regard to future submissions.

The population-based health care data collection authorized by Act 622 offers Louisiana and its health care providers a first opportunity to plan and operate intervention strategies systematically that address the antecedents of death. The State Health Care Data Clearinghouse is also planning to work with hospitals and other facilities across the state to develop a statewide hospital emergency room data system and other data sets to provide an even more complete picture of Louisiana health, and to address the urgent concerns of the increasing threat of bioterrorism.